A SMARTER WAY TO CHOOSE THE WAY YOU AGE

The Exercise Coach®

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A SMARTER WAY TO CHOOSE THE WAY YOU AGE

INTRODUCTION

By Brian Cygan, CEO/Co-Founder and James Fisher, PhD, Chief Science Officer

"We believe that aging should be a journey marked by vitality, strength, and independence.

TheExerciseCoach®

At The Exercise Coach®, our purpose is simple yet profound: to transform the way people age. We believe that aging should be a journey marked by vitality, strength, and independence. This mission drives us to innovate and provide solutions that address not just the length of life (longevity) but, more importantly, its quality (health span).

In recent years, the fitness industry has begun shifting its focus from performance and aesthetics to health, longevity, and overall well-being. This shift reflects growing awareness among individuals of all ages, particularly older adults, who are seeking meaningful improvements to their quality of life rather than simply extending their years. Consider these statistics:

- **Life Expectancy and Health Span:** While global life expectancy has increased significantly—reaching an average of over 73 years—there is a growing disparity between life expectancy and health span. The average person spends about the last 10-12 years of life in poor health, which underscores the need for interventions that add life to years, not just years to life.
- **Health Consciousness:** A 2024 survey found that 75% of adults over 50 are more concerned about health and functionality than they were a decade ago.
- **Frustration with Traditional Fitness Plans:** More than 60% of older adults report dissatisfaction with traditional gym-based exercise programs, citing concerns such as injury risk, inefficiency, and lack of personalization.

At The Exercise Coach®, we are committed to addressing these concerns through innovative, evidence-based fitness solutions tailored to the unique needs of each individual. Our programs focus on strength, safety, and efficiency, making fitness accessible, effective, and empowering for everyone, regardless of age or fitness level.

This brief introduces our groundbreaking approaches to fitness, which include Exerbotics strength training, Concentrated Cardio™, and Coach-Assisted Stretching. Together, these initiatives redefine what it means to age smarter, healthier, and stronger.

Let us guide you through how The Exercise Coach is reshaping the landscape of fitness for longevity and quality of life. Welcome to a smarter way to age.

EXERBOTICS®: 21ST CENTURY STRENGTH TRAINING

With Exerbotics®, resistance is governed by advanced computer controls, guiding you to generate ability-based muscle actions through your exact, individualized range of motion.

TheExerciseCoach®

Exerbotics® has moved strength training into the 21st century with technology previously only seen before in the most specialized exercise science laboratories. With Exerbotics, resistance is governed by advanced computer controls, guiding you to generate ability-based muscle actions through your exact, individualized range of motion.

At The Exercise Coach®, our evidence-based strength training is optimized with attention to three pillars: safety, effectiveness, and efficiency.

Safety

Around 90% of strength training injuries are a product of free-weight use [1]. Since Exerbotics® do not have a weight stack there is 0% chance of injury from a dropped weight or a falling weight stack. Additionally, all strength training workouts at The Exercise Coach are supervised, enhancing your training technique through specific coaching and further reducing your risk of injury [2]. Your range of motion is also precisely tailored to concentrate mechanical loading on your muscles and mitigate stress on your joints and connective tissue.

Effectiveness

Muscles are ~40% stronger in the eccentric (muscle lengthening) compared to concentric (muscle shortening) phase of exercise [3]. Researchers have long recognized the benefits of eccentric strength training for tissue remodeling and injury prevention due to the enhanced cellular, mechanical, and neural adaptations [4,5]. Using Exerbotics® machines an Exercise Coach can guide your workout intelligently, based on your current level of strength, providing appropriate eccentric overload to maximize muscular recruitment and adaptation. By preferentially recruiting type II, fast-twitch muscle fibers [6], Exerbotics optimizes strength training for growth and longevity.

Research highlights two key reasons why accentuating the eccentric component is beneficial:

- Type II muscle fibers are the most receptive to growth, making them crucial for functional strength, joint support, and overall metabolic health.
- Declining strength and functionality as we age is characterized by a loss of type II muscle fibers [7], making them the most valuable to retain and recover.

Efficiency

Exerbotics® devices guide your effort through biofeedback and accommodate human physiology by accentuating the eccentric component, improving the efficiency of your workout. Each repetition is tailored to you, with no minimal strength requirement, or extraneous force output. Whether you lack confidence, or are one of the world's strongest, Exerbotics® provides resistance uniquely tailored to you. Strength training at The Exercise Coach uses a scientifically proven approach [8,9], so efficient that you'll achieve comprehensive results to your strength and health in only 2 x 20-minute whole-body workouts per week.

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SUPPLEMENTING STRENGTH TRAINING WITH CONCENTRATED CARDIO™

We provide Concentrated Cardio™ options that incorporate Reduced Exertion High-intensity Interval Training (ReHIT), designed to complement your strength training routine.

TheExerciseCoach®

At The Exercise Coach®, we firmly believe that Strength Changes Everything. Strength training is not only essential for building and maintaining muscle but also plays a vital role in cardiovascular health [1], quality of life, and longevity [2,3]. While strength training offers substantial cardiovascular benefits, we recognize that some individuals may also wish to engage in additional forms of cardiovascular exercise. To support this, we provide Concentrated Cardio™ options that incorporate Reduced Exertion High-intensity Interval Training (ReHIT), designed to complement your strength training routine.

Concentrated Cardio

Incorporating ~ 5 minutes of intervals of higher- and lower-intensity cardiovascular exercise, Concentrated Cardio represents an effective training method to increase your cardiorespiratory fitness to at least the same degree as longer duration moderate intensity cardiovascular exercise - in a considerably shorter amount of time [4]. Furthermore, research shows that Concentrated Cardio improves blood pressure and other heart disease risk factors and metabolic markers [4,5], making this the right intensity for you, no matter whether you're new to cardio or are regularly running marathons.

ReHIT

ReHIT, takes your cardiovascular training one step further both in effectiveness and efficiency.
Using artificial intelligence personalized sprint sessions of only 2 x 20seconds, ReHIT improves your cardiometabolic risk factors in just 8-weeks [6]. Mechanistically, ReHIT improves energy metabolism and mitochondrial biogenesis – improving energy production and allowing your body to better utilize fat to generate energy at rest [7]. ReHIT trains your body and works to improve your health and fitness at a cellular level, resulting in ~15% increase in your cardiovascular fitness in around 12-weeks (similar to 5 x 45min sessions per week!) [8].

Safety

We understand that you may have concerns about performing higher-intensity exercise, especially if you have a medical condition. That's why we prioritize safety and provide scientifically validated options like Concentrated Cardio, which has been shown to be safe and effective for individuals with health conditions such as type 2 diabetes [9], heart failure [10], chronic obstructive pulmonary disease [11], and coronary artery disease [12]. Additionally, our coaches will complete a health intake and solicit input from your physician as needed to ensure your exercise program is tailored to your unique health needs, giving you peace of mind as you work toward better fitness and well-being.

At The Exercise Coach®, as with our evidence-based strength training, your cardiovascular training is optimized with attention to safety, effectiveness, and efficiency - serving to improve your health and fitness.

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ENHANCING YOUR HEALTH AND WELL-BEING WITH COACH-ASSISTED STRETCHING

Research has shown that Coach-Assisted Stretching further serves to reduce stress, and improve balance and overall physical function.

TheExerciseCoach

At The Exercise Coach®, our philosophy that Strength Changes Everything is underpinned by an evidence-based approach that strength training represents the most important investment for your health [1]. Research has shown that recruitment of muscle fibers through strength training not only improves your strength and physical function [2] but also your systemic health through the release of myokines (signaling proteins released by muscle cells that positively impact your brain, bones, liver, pancreas, skin and more [3]). While strength training can also improve your flexibility [4], we know many people want to add some specialized stretching to their routine to achieve next level flexibility results with a relaxing and stress-relieving activity, so The Exercise Coach® offers you Coach-Assisted Stretching.

Coach-Assisted Stretching

Available in 20- or 40-minute sessions, our 1-on-1 Coach-Assisted Stretching applies evidence-based methods to strategically activate and lengthen your muscles to improve your flexibility and functionality [5,6]. Research has shown that Coach-Assisted Stretching further serves to reduce stress [6], improve balance [7], and overall physical function.

We know that our bodies were designed to move, however, modern living has left us spending unnatural lengths of time in postural positions that lead to problematic levels of tightness in our muscles and connective tissue (fascia).

Lower Body

Tight hip flexors as a result of too much time in a seated position can contribute to lumbar spinal instability and lower back pain and subsequent risk of knee valgus and increased risk of knee pathologies [8]. Our Coach-Assisted Stretching can be delivered with a focus upon the lower-body, targeting the muscles of the lower- and upper-leg and hip complex serving to improve flexibility and functionality and mitigating risks of subsequent conditions [9].

Upper body

An abundance of time with our arms in front of us (working at a desk, driving, etc.) can lead to weak muscles in the upper back and tight muscles in the upper chest, resulting in poor upper body posture and function, and subsequent shoulder or trunk injuries [10]. Coach-Assisted Stretching of the upper body is shown to improve flexibility, specifically at the shoulder joint and shoulder girdle allowing better posture and functional performance [11], as well as reducing incidence of neck pain, and headaches [12].

In combination, poor upper- and lower-body posture can lead to loss of balance and poor postural stability resulting in a reduction in coordination. As with all exercise modalities at The Exercise Coach, our Coach-Assisted Stretching follows evidence-based practice which can improve postural stability and day-to-day performance [13], further supporting your lifelong overall health and fitness.

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THE 6-MONTH BALANCE TRANSFORMATION PLAN™

The combination of balance- and strength-training presents a holistic approach to simultaneously reducing your risk of falls and improving your well-being.

TheExerciseCoach®

At The Exercise Coach®, our focus is evidence-based strength training to help improve your health and quality of life [1]. Embodying our Strength Changes Everything approach, we know that our methods are safe, effective, and efficient, and underpinned by a wealth of scientific research to improve your functional performance, dynamic balance [2], and bone mineral density [3]. However, we know that particular attention to balance training can be important as we age. Annually, 30% of adults over 65 years fall once, and 15% fall twice or more [4]. Moreover, 68% of falls result in injury [5] and 5-10% of falls result in a fracture [6]. Our supervised 6-month balance transformation program presents a comprehensive approach of 3 synergistic modalities to improving your strength, balance, coordination, and physical function.

Strength Training

Using Exerbotics machines an Exercise Coach can guide your workout intelligently, based on your current level of strength, providing appropriate overload to optimize muscular recruitment and adaptation. Declining strength and rate of force production as we age is characterized by a loss of type II, fast twitch muscle fibers [7], which significantly increases the risk of falls [8,9]. However, our safe and effective strength training can preferentially recruit these muscle fibers [10] – the most important to retain and recover – serving to improve your gait speed, toe clearance, functional strength and balance [2,11].

Balance Training

The 6-month balance transformation program uses a specific and evidence-based device for balance training and assessment [12]. The combination of balance- and strength-training presents a holistic approach to simultaneously reducing your risk of falls and improving your well-being [13]. In addition, using Exerbotics Balance Tracker™ (EBT) technology our supervised balance transformation program incorporates cognitive exercises which, when combined in this comprehensive program, shows reductions in fear of falling [14] and improvements in physical function, balance, and mobility [15].

Coach Assisted Stretching

Finally, our 6-month balance transformation program includes our 1-on-1 Coach-Assisted Stretching. This applies evidence-based methods to strategically activate and lengthen your muscles to improve your flexibility, functionality, and balance [18,19], and overall physical function. Furthermore, these techniques can improve postural stability and day-to-day performance [20], further supporting your overall wellbeing.

At The Exercise Coach®, our 6-month Balance Transformation Program is built on the same three pillars as all of our training: safety, effectiveness, and efficiency. This program is underpinned by science and research proven to optimize your lifelong health and fitness.

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